Work Orde		8440			*984	440*								Page	e 1
Revision ID: Item Name:	D2278 Step Leg	Shout Otion	2.00		Accept			<u>040</u>	100)* :	Setup	Start Stop	I VI	S1* S2*	
Start Date: Required Date:	3/11/13 3/25/13	Start Qty: 3 Req'd Qty: 3		*8* *8*			t Item I tomer:	D;							
Reference:	5,25,15					Cus	·								
Approvals:	Process I	Plan: MC3	-	Date: /3-03-/3	Tooling:		Da	ate:]	Run	Start	"IV	R1*	•
•••				Date:	SPC (Y/N):		D:	ate:				Stop	*N	R2*	•
Sequence ID/ Work Center ID)	Operation Description			Set Up/ Run Hours	То	ol ID	Tool #	Plan Code	Accept Qty	Rej Qty		Reject Number	Insp.	
Draw Nbr	R	evision Nbr	:												
D2278	R	ev F			•										
*100 *100* Waterjet FLOW CNC Waterje (20位(,0公)		FLOW WATER Mei 1-C Deb	no	Dwg D2278 Dwg Rev: cessary	0.00 Prog Rev: 1	2-				_8		•		9 45	_13.or
*110 *110*		QC2- Inspect pa	rts off ma	achine FAI/FAIB	0.00					8			ı	OAS	ادم . ١٥
QC Quality Control		Mei	no		0.00									9-89	_1,2,0,4
¹²⁰ *12∩*	•	QC8- Inspect pa	rts - seco	nd check	0.00	·				8					
QC Quality Control		Me	no		0.000 13 4	9						450			

											DQA:	Date:	
NCR:	Yes	/ No				WORK ORDER NON-O	COI	NFOR	MANCE / UP	DATE			
		-,						,			QA Closed:	Date:	
Work Ord	oř.			,		DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
VVOIKOIU	C1.					Rework	1		Skid-tube	Crosstube	1	Water Jet	Engineering
Part l	No.					Scrap	1	!	Machining	Small Fab	Pro	d. Eng. Coor.	Quality
	•					Use-as-is]	Thern	noforming	Finishing	Rec/Sto	re/Packaging	Other
NCR	No.					Work Order Update]		Large Fab	Composite]	Supplier	
	- 7		1	Т		, , , , , , , , , , , , , , , , , , , ,		*****			C: 0		
Root		D-4-	Cham	0	1	ption of work order update		Initial		tion	Sign &	Verification	OC Inspector
Cause	_	Date	Step	Qty	-	or Non-conformance	<u>Cn</u>	ief Eng	Desci	ription	Date	verification	QC Inspector
Doc/Data	Н		į										
Equip/Tooling	Н												
Operator	Н	•					1					!	
Material	Н												
Setup Other	Н												
Process	H												
Supplier -	Н										,		
Training	П							,	<u> </u> 				
Unapproved							$oldsymbol{ol}}}}}}}}}}}}}}$						
						F	AUl	T CATE	GORY				
Landi	ng G	iear				General		_			-		ī
] .		Bending				Bend		Grain			Ovalized		Pressure/Forced
		Centre N	ot Conce	ntric to	o/s	BOM/Route		Hardwa	ire		Over/Under	tolerance	Temperature/Cure
		Cracks				Broken/Damaged		Inspect	ion Incomplete		Part Incorred	ct I	Weld

Instructions Incomplete/Unclear

Maintenance

Out of Calibration

Out of Sequence

Outside Dimensions

Mislabeled

Misread

Offset

Wrong Stock Pulled

Other

Part Lost/Missing

Positioned Wrong

Power Loss/Surge

Part Moved

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Crushed/Crimped

Inspection Strip in Tube

Torque Waves in Extrusion

Cuffs

Heat Treat

Burrs

Contamination

Countersink

Cut Too Short Drill Holes

Drawing

Finish

Folio

r ID 98 55:31 PM	440		*982	140*						Page 2
D2278 Step Leg			Accept	*N900	<u>040</u>	100	*		171.	31* 32*
3/11/13 3/25/13	Start Qty: 8.00 Req'd Qty: 8.00	*8* *8*	·	Cust Item 1 Customer:	ID:					
Process Pla	n:	Date:	Tooling: SPC (Y/N):			-			I.Z. F	R1* R2*
•	Operation Description Chemical Conversion Co	oat per QSI005 4.1	Set Up/ Run Hours 0.00	Tool ID	Tool#	Plan Code	Accept Qty	Qty	Number	Insp. Stamp
	QC3- Inspect Part Finish Memo		0.00	18			8	<u>.</u>		
		ock Location (A	0.00				8×	<u> </u>		J.
	D2278 Step Leg 3/11/13 3/25/13 Process Pla QC:	D2278 Step Leg 3/11/13 Start Qty: 8.00 3/25/13 Req'd Qty: 8.00 Process Plan: QC: Operation Description Chemical Conversion Co	D2278 Step Leg 3/11/13 Start Qty: 8.00 * * * * * * * * * * * * * * * * * *	Accept Step Leg 3/11/13 Start Qty: 8.00 * * * * * * * * * * * * * * * * * *	D2278	Accept *N900040 Step Leg 3/11/13 Start Qty: 8.00 *8* Cust Item ID:	D2278	Accept	Start Star	Accept

NCR: Yes / No WORK ORDER NON-CONFORMANCE / UPDATE												
·										QA Closed	: Date	:
. .					DISPOSITION			.	AGAINST DI	EPARTMENT	T/PROCESS	
o					Rework Scrap Use-as-is Work Order Update		Thern	~⊢	Crosstube Small Fab Finishing Composite	⊣	· · ·	Engineering Quality Other
				Descri	ption of work order update		Initial	Acti	on	Sign &		
D	ate	Step	Qty	(or Non-conformance	Cł	nief Eng	Descri	ption	Date	Verification	QC Inspector
						EALI	T CATE	GORY				
- 6	 					FAUI	LICATE	GURT				
Ber Cer Cra Cru Cuf Hea Insp	nding otre Not otks shed/C fs at Treat oection ples in que Wa	rimped : Strip in Bend aves in E	Tube		Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes Drawing		Inspecti Instruct Mainte Mislabe Misread Offset Out of (ion Incomplete ions Incomplete/U enance eled d	nclear	Part Incorre Part Lost/M Part Moved Positioned	ect lissing l Wrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
	g Gear O. Cra Cra Cru Cuf Hea Inst	g Gear Bending Centre Not Cracks Crushed/C Cuffs Heat Treat Inspection Ripples in Torque Wa	g Gear Bending Centre Not Concer Cracks Crushed/Crimped Cuffs Heat Treat Inspection Strip in Ripples in Bend Torque Waves in E	g Gear Bending Centre Not Concentric to C Cracks Crushed/Crimped Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend	g Gear Bending Centre Not Concentric to O/S Cracks Crushed/Crimped Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend Torque Waves in Extrusion	g Gear General Bending Centre Not Concentric to O/S Cracks Crushed/Crimped Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend Torque Waves in Extrusion Disposition Rework Scrap Use-as-is Work Order Update or Non-conformance Bend Bend Bend BoM/Route BOM/Route BOM/Route Contamination Countersink Cut Too Short Drill Holes Drawing	TAU Gear Bending Centre Not Concentric to O/S Cracks Crushed/Crimped Cuffs Cuffs Cuffs Heat Treat Inspection Strip in Tube Rework Scrap Use-as-is Work Order Update Description of work order update or Non-conformance Character Bend Bend Bend BoM/Route Broken/Damaged Crushed/Crimped Cuffs Contamination Countersink Inspection Strip in Tube Ripples in Bend Torque Waves in Extrusion Drawing	DISPOSITION Rework Scrap Use-as-is Use-as-is Work Order Update Date Step Qty Description of work order update or Non-conformance FAULT CATE Gear General Bending Centre Not Concentric to O/S Cracks Cracks Broken/Damaged Inspect Instruct Undate FAULT CATE General Bend Centre Not Concentric to O/S Cracks Crushed/Crimped Cuffs Contamination Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend Torque Waves in Extrusion Drawing Drawing Drawing Drawing Doubter Inspect Out of General All Chief Eng Therm Description of work order update Initial Chief Eng FAULT CATE Semantical Chief Eng FAULT CATE Contamination Hardwa Inspection Strip in Tube Cut Too Short Misreac Offset Torque Waves in Extrusion Drawing Out of General Drawing Drawing Out of General Drawing Drawing	DISPOSITION Rework Scrap Use-as-is Work Order Update Date Step Qty Description of work order update or Non-conformance Date Step Qty Send Bend Centre Not Concentric to O/S BOM/Route Gracks Broken/Damaged Crushed/Crimped Cuffs Cushed/Crimped Cuffs Contamination Heat Treat Inspection Strip in Tube Ripples in Bend Inspection Extrusion Drawing DISPOSITION Rework Scrap Machining Thermoforming Large Fab Charles Skid-tube Skid-tub	DISPOSITION Rework Skid-tube Crosstube Machining Small Fab Thermoforming Composite	DISPOSITION Rework Scrap Use-as-is Work Order Update Date Date Step Qty Description of work order update or Non-conformance Date Step Qty Description of Work Order Update Or Non-conformance Date Step Qty Description of Work Order Update Or Non-conformance Date Step Qty Description of Work Order Update Or Non-conformance Date Step Qty Description of Work Order Update Or Non-conformance Date Step Qty Description of Work Order Update Or Non-conformance Date Step Qty Description of Work Order Update Or Non-conformance Date Step Qty Description of Work Order Update Or Non-conformance Date Step Qty Description of Work Order Update Or Non-conformance Date Step Qty Description of Work Order Update Or Non-conformance Date Step Qty Description of Work Order Update Or Non-conformance Date Step Qty Description of Work Order Update Or Non-conformance Date Step Qty Description of Work Order Update Or Non-conformance Date Step Qty Description Or Non-conformance Date Step Qty Description of Work Order Update Or Non-conformance Date Step Qty Description Or Non-conformance Date Step Qty Description of Work Order Update Or Non-conformance Date Step Qty Description Or Non-conformance Date Step Qty D	DISPOSITION Rework Scrap Use-as-is Work Order Update On Non-conformance Chief Eng Description Date Step Qty Or Non-conformance Chief Eng Description Ovalized Over/Under tolerance Part Lost/Missing Crushed/Crimped Broken/Damaged Inspection Incomplete Broken/Damaged Inspection Incomplete Or Under Update Or Non-conformance Ovalized Over/Under tolerance Part Lost/Missing Crushed/Crimped Description Ovalized Over/Under tolerance Part Moved Part Lost/Missing Description Ovalized Over/Under tolerance Part Moved Part Lost/Missing Description Ovalized Over/Under Under Description Ovalized Over/Under Under Description Ovalized Over/Under tolerance Part Moved Part Lost/Missing Description Ovalized Over/Under Description Ovalized Over/Under Under Description Ovalized Over/Under Under Description Ovalized Over/Under Description Ovalized Over/Under Description Ovalized Over/Under tolerance Part Moved Part Lost/Missing Description Ovalized Over/Under Description Ovalized Over/Under Description Ovalized Over/Under Description Ovalized Over/Under tolerance Part Moved Part Lost/Missing Description Ovalized Over/Under Description Ovalized Over/Under Description Ovalized Over/Under tolerance Part Moved Part Lost/Missing Description Ovalized Over/Under Description 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Outside Dimensions

DQA:

Date:

Wave/Twist in Tube

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Ord				*984	140*					Page 3
Item ID: Revision ID: Item Name:	D2278 Step Leg			Accept	*N900	040	100)* s	Setup Start Stop	*NS1* *NS2*
Start Date: Required Date Reference:	3/11/13 : 3/25/13	Start Qty: 8.00 Req'd Qty: 8.00	*8* *8*		Cust Item I Customer:	D:				
Approvals:	Process QC:	s Plan:	Date:	Tooling: SPC (Y/N):		ate:		I	Run Start Stop	*NR1* *NR2*
Sequence ID/ Work Center I 160 *160*	ID.	Operation Description QC21- Final Inspection	· Work Order Release	Set Up/ Run Hours 0.00	Tool ID	Tool #	Plan Code	Accept Qty		Reject Insp. Number Stamp
QC Quality Control		Memo		0.00				•		20418

	Water Jet Engineering Eng. Coor. Quality /Packaging Other
Work Order: Rework	Water Jet Engineering Eng. Coor. Quality /Packaging Other
Part No. Scrap Machining Small Fab Prod. I Use-as-is Thermoforming Finishing Rec/Store/	Eng. Coor. Quality /Packaging Other
	Supplier
Root Description of work order update Initial Action Sign &	
Cause Date Step Qty or Non-conformance Chief Eng Description Date	Verification QC Inspector
Doc/Data Doc/Data	
Equip/Tooling Equip/Tooling	
Operator	
Material	
Setup Setup	
Other	
Process Process	
Supplier	
Training	
Unapproved	
FAULT CATEGORY	
Landing Gear General Bending Bend Grain Ovalized	Pressure/Forced
Bending Bend Grain Ovalized Centre Not Concentric to O/S BOM/Route Hardware Over/Under tol	—
Cracks Broken/Damaged Inspection Incomplete Part Incorrect	Weld
Crushed/Crimped Burrs Instructions Incomplete Part Lost/Missing Part Lost/Mi	}— -
Cuffs Contamination Maintenance Part Moved	Wrong Stock runed
Heat Treat Countersink Mislabeled Positioned Wro	ong
Inspection Strip in Tube Cut Too Short Misread Power Loss/Sur	_
Ripples in Bend Drill Holes Offset	
Torque Waves in Extrusion Drawing Out of Calibration	

Outside Dimensions

DQA:

Date:

Wave/Twist in Tube

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Page 1

Work Order ID:

98440

Parent Item:

D2278

Parent Item Name:

Step Leg

044/8

Start Date: 3/11/13

Required Date: 3/25/13

Start Qty: 8.00

Required Qty: 8.00

Comments:

IPP Rev:A IPP Rev:B

New Issue

05-11-07 JL

Now 6061-T6 06-06-23 JLM

IPP Rev C

New flat pattern 08.01.11 EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6S.080		Purchased	No			100	sf	303.0000	0.9815	8.2652632	2 1	3 21	A
6061-T6 .080 Sheet									127.000		107/	13.09	0.
				Location		Loc Oty	<u>Lo</u>	oc Code					
				MAT021		303.000032							
				1172	85	0.497264							
				1245	72	0.502768							
				1247	86	302							

									DQA.	Date.	
NCR: Ye	es / No				WORK ORDER NON-C	CONFOR	MANCE / UF	PDATE	QA Closed:	Date:	
					DISPOSITION			AGAINST I	DEPARTMENT		
Work Order	r:				Rework	1	Skid-tube	Crosstube		Water Jet	Engineering
Part No	0.				Scrap		Machining	Small Fab	Pro	d. Eng. Coor.	Quality
NCR No	0	· -		· 	Use-as-is Work Order Update	Ther	moforming Large Fab	Finishing Composite	Rec/Sto	re/Packaging Supplier	Other
Root				Descri	ption of work order update	Initial	A	ction	Sign &		
Cause	Date	Step	Qty	. (or Non-conformance	Chief En	g Des	cription	Date	Verification	QC Inspector
Doc/Data										ļ	
Equip/Tooling	<u>_</u> :										
Operator										<u> </u>	
Material									·		
Setup			. ,					•			
Other			Ì.	ļ.			1				
Process				 							
Supplier									,		
Training	<u> </u>						-		·		
Unapproved		<u> </u>				<u> </u>	<u> </u>			<u> </u>	<u> </u>
	·					AULT CAT	EGORY		<u> </u>		
Landing				_	General				_	_	1 , .
	Bending			_	Bend	Grain].	Ovalized	<u> </u>	Pressure/Forced
 	Centre No	ot Conce	ntric to	o/s	BOM/Route	Hardw			Over/Under		Temperature/Cure
-	Cracks				Broken/Damaged	_	tion Incomplete		Part Incorre	_	Weld
	Crushed/	Crimped			Burrs		ctions Incomplete	/Unclear	Part Lost/Mi	ssing	Wrong Stock Pulled
-	Cuffs			· _	Contamination	<u> </u>	enance		Part Moved	•	
L	Heat Trea			<u> </u>	Countersink	Mislat			Positioned V		1
	Inspection	n Strip in	Tube		Cut Too Short	Misrea		·	Power Loss/	Surge	Other -
	Ripples in	Bend	-	-	Drill Holes	Offset					•

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish Folio

DART AEROSPACE LTD	Work Order:	98440
Description: Leg	Part Number:	D2278
Inspection Dwg: D2278 Rev: F		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

X First Article Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.354	+/-0.010	0.352	V		V	TKM-01
0.354	+/-0.010	0.354	1/		1/	
16.46	+/-0.030	16.46	V		7	JKM-01 JKM-06
Ø0.128	+0.005/-0.000	0.132	1		V	
R0.354	+/-0.030	RO.354	V		R-G	
2.00	+/-0.030	2.004			V	
4.74 -	+/-0.030	4.74	V		V	
8.46	+/-0.030	8.46	j		T	
0.213	+/-0.010	0.218	1.		1/	
0.750	+/-0.010	0.750		· · · · · · · · · · · · · · · · · · ·	V	
0.080 thick	+/-0.010	0.078	1/		1/	
		7 7 7			V	
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			2 A		
Measured by:	11/1/	Audited by:	27	Prototype Approval:	N/A
Date:	13.04.07	Date:	13 49	Date:	N/A

Rev	Date	Change	Revised by	Approved
Α	04.10.12	New issue P/O D2582	KJ/JLM	
В	06.03.08	Dwg Rev. changed	KJ/JLM	
С	06.06.23	Dwg Rev. changed	KJ/JLM	_
D	08.02.28	Dimensions updated per Dwg Rev F	KJ/DD	NA.
\		spaces po. Ding (tot)	110,00	1. 1-X-2

